



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/050,831 | 01/18/2002 | Toru Aoki | 111469 | 6928 |
| 25944 | 7590 | 09/09/2005 | EXAMINER | |
| OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320 | | | NGUYEN, JENNIFER T | |
| | | | ART UNIT | PAPER NUMBER |

2674

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/050,831

Applicant(s)

AOKI ET AL.

Examiner

Jennifer T. Nguyen

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16 is/are allowed.
- 6) ☒ Claim(s) 1 and 19-24 is/are rejected.
- 7) ☒ Claim(s) 2-5 is/are objected to.
- 8) ☒ Claim(s) 6-26 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's election with traverse of species I, Fig. 1, claims 1-5, 16, and 19-24 in the reply filed on 6/17/05 is acknowledged. The traversal is on the ground(s) that all species is sufficiently related that a thorough search for the subject matter of any one species would encompass a search for the subject matter of the remaining species. This is not found persuasive because different species discloses different methods to obtain input image data according to the control signal. For example, species II, Fig. 10 discloses converting 11-bit input image to 10-bit input image according to the control signal to generate convert image data. Species III, Fig. 16, discloses calculating the mean gray scale value of input image and convert the image data according to the mean gray scale value. Species I, Fig. 1 discloses adjusting input image which is not require neither method of converting bit input image or calculating the mean gray scale value of input image. It is respectfully submitted that search for different subject matters could be made burden on examiner.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 2674

3. Claims 1 and 19-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Naito (Patent No. US 6,462,735).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claim 1, referring to Figs. 1-3, Naito teaches an image processing circuit, comprising:

a control-signal generating device (500) that generates a control signal indicating the type of an electro-optical panel (400) used in combination with the image processing circuit (200) (i.e., different type of an electro-optical has different V-T characteristic) (col. 5, lines 49-67);

a D/A conversion device (260) that converts input image data from a digital signal to an analog signal to generate an image signal and that adjusts a range where the signal level of the image signal is changed, according to the control signal (col. 4, line 65 to col. 5, line 8);

and a processing device (not shown) that generates an output image signal to be sent to the electro-optical panel, according to the image signal (col. 15, lines 50-67).

Regarding claim 19, Naito teaches an electro-optical panel having an electro-optical material in which a transmittance of the electro-optical material is changed according to an applied voltage, and receiving the output image signal (col. 3, lines 17-19, col. 4, line 65 to col. 5, line 2).

Art Unit: 2674

Regarding claim 20, referring to Fig. 2, Naito teaches the electro-optical panel (400) further comprising:

a device substrate including a plurality of data lines (from data drive circuit 430), a plurality of scanning lines (from scanning circuit 420), switching devices (i.e., transistor, not shown) disposed at the intersections of the plurality of data lines and the plurality of scanning lines, and pixel electrodes connected to the switching devices (col. 7, lines 63-67);

an opposing substrate having an opposing electrode; and

an electro-optical material sandwiched by the device substrate and the opposing substrate (col. 8, lines 1-16),

the reference potential being the potential of the opposing electrode, and

the output image signal being sequentially sent to the plurality of data lines (col. 8, lines 27-34).

Regarding claim 21, referring to Fig. 10, Naito teaches a projection display device comprising an electro-optical device (col. 8, lines 41-43).

Regarding claim 22, Naito teaches a projection display device (1100) comprising:

a light source (1106);

an electro-optical device that modulates light emitted from the light source (col. 16, lines 17-25); and

a projection-lens system (1114) that projects light emitted from the electro-optical device (col. 16, lines 26-31).

Regarding claim 23, Naito teaches a phase-development circuit (230) (Fig. 2) that applies phase development to the image signal whose range is adjusted by the D/A conversion device, to generate phase-development image signals (col. 7, lines 29-43).

Regarding claim 24, Naito teaches the processing device generating the output image signal according to a voltage-transmittance characteristic of the electro-optical panel (col. 5, lines 49-67).

4. Claims 2-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claim 16 is allowed. The following is an examiner's statement of reasons for allowance: claim 16 is allowable because the it is directed to a nonobvious improvement over the invention described in patent No. US 6,462,735. The improvement comprises:

inverting the signal polarity of the image signal with a certain potential being used as a reference at an inversion period determined in advance while amplifying the image signal to generate an inverted image signal;

alternately selecting one of a positive-polarity reference voltage higher than a reference potential determined in advance according to the type of the electro-optical panel by a minimum applied voltage, and a negative-polarity reference voltage lower than the reference potential by the minimum applied voltage, at the inversion period to generate a reference signal; and

synthesizing the inverted image signal and the reference signal to generate the output image signal;

wherein the minimum applied voltage is specified for each electro-optical panel, and is the lowest voltage required to be applied to the electro-optical material to obtain a range of the transmittance to be used to display images.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

6. Applicant's arguments with respect to claims 1-5, 16, and 19-24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer T. Nguyen whose telephone number is 571-272-7696. The examiner can normally be reached on Mon-Fri: 9:00am-5:30pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick N. Edouard can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 2674

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer Nguyen
9/2/05



PATRICK N. EDOUARD
SUPERVISORY PATENT EXAMINER